

| Country | Year | Population (millions) | GDP (billion USD) | Life expectancy (years) | Infant mortality (per 1,000 live births) | Unemployment (%) | Urban population (%) | Healthcare expenditure (USD per capita) | Renewable energy consumption (%) |
|----------------|------|-----------------------|-------------------|-------------------------|--|------------------|----------------------|---|----------------------------------|
| USA | 2019 | 331.9 | 21.4 | 78.4 | 10.5 | 3.6 | 82.7 | 1,200 | 12.1 |
| China | 2019 | 141.2 | 14.7 | 77.1 | 14.1 | 5.8 | 60.6 | 1,000 | 16.2 |
| India | 2019 | 138.0 | 3.0 | 74.6 | 28.1 | 6.2 | 35.7 | 150 | 1.8 |
| Germany | 2019 | 83.7 | 4.2 | 81.2 | 4.1 | 3.5 | 73.8 | 1,100 | 28.5 |
| Japan | 2019 | 126.5 | 5.0 | 84.6 | 2.9 | 2.5 | 94.1 | 1,300 | 24.3 |
| UK | 2019 | 67.8 | 3.0 | 81.1 | 4.5 | 3.8 | 89.2 | 1,000 | 29.1 |
| France | 2019 | 67.4 | 3.0 | 82.4 | 4.0 | 7.1 | 98.3 | 1,100 | 28.9 |
| Italy | 2019 | 60.3 | 2.1 | 83.7 | 3.5 | 9.5 | 71.8 | 1,000 | 27.4 |
| Spain | 2019 | 45.9 | 1.5 | 83.5 | 3.2 | 11.2 | 92.1 | 1,000 | 27.1 |
| Canada | 2019 | 38.1 | 2.0 | 83.4 | 3.1 | 6.5 | 81.2 | 1,200 | 23.5 |
| South Korea | 2019 | 51.7 | 1.7 | 83.4 | 2.8 | 3.2 | 92.1 | 1,300 | 23.1 |
| Australia | 2019 | 25.5 | 1.3 | 83.4 | 2.8 | 5.5 | 85.1 | 1,200 | 22.8 |
| Sweden | 2019 | 10.0 | 0.5 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Norway | 2019 | 5.4 | 0.4 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Denmark | 2019 | 5.6 | 0.4 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Netherlands | 2019 | 17.4 | 0.9 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Belgium | 2019 | 11.5 | 0.6 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Austria | 2019 | 9.0 | 0.5 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Switzerland | 2019 | 8.7 | 0.5 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Portugal | 2019 | 10.6 | 0.3 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Greece | 2019 | 11.1 | 0.2 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Ireland | 2019 | 4.7 | 0.2 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Poland | 2019 | 38.1 | 0.4 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Czech Republic | 2019 | 10.7 | 0.3 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Slovakia | 2019 | 5.4 | 0.2 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Hungary | 2019 | 10.1 | 0.2 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Slovenia | 2019 | 2.1 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Croatia | 2019 | 4.3 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Bulgaria | 2019 | 7.5 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Romania | 2019 | 21.2 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Lithuania | 2019 | 3.0 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Latvia | 2019 | 1.9 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Estonia | 2019 | 1.3 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Finland | 2019 | 5.5 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Iceland | 2019 | 0.3 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Israel | 2019 | 8.7 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Turkey | 2019 | 84.7 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| Brazil | 2019 | 215.0 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | 1,300 | 22.5 |
| India | 2019 | 138.0 | 0.1 | 83.4 | 2.8 | 6.5 | 91.2 | | |

As a below named inventor, I hereby declare that:

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter that is claimed and for which a patent is sought on the invention entitled Assay with Reduced Background, the specification of which is attached hereto unless the following box is checked:

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application, which designated at least one country other than the United States listed below, and have also identified below any foreign application for patent or inventor's certificate, or PCT international application having a filing date before that of the application on which priority is claimed.

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or under § 365(c) of any PCT international application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information that is material to patentability as defined in 37 C.F.R. § 1.56 that became available between the filing date of the prior application and the national or PCT international filing date of this application.

- Page 1 of 2 -

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

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I hereby authorize the U.S. attorneys named herein to accept and follow instructions from Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL, ENGLAND, as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and me. In the event of a change in the persons from whom instructions may be taken, the U.S. attorneys named herein will be so notified.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

| | | |
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| Signature of sole or first inventor | <u>Neil David Hammond Raven</u> | Date 2 Oct. 2001 |
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09/889520
December 2001

POWER OF ATTORNEY FROM ASSIGNEE WITH DELEGATION

Microbiological Research Authority, having a principal place of business at CAMR, Porton Down, Salisbury, Wiltshire SP4 0JG, Great Britain, is assignee of the entire right, title, and interest for the United States of America (as defined in 35 U.S.C. §100), by reason of an Assignment to the Assignee executed on 2 October 2001 of an invention known as Assay with Reduced Background (Attorney Docket No. 1581.0810000/RWE), which is disclosed and claimed in a patent application of the same title by the inventor(s) Neil David Hammond Raven and Matthew Patrick Wictome (said application filed on _____ at the U.S. Patent and Trademark Office, having Application Number 09/889,520).

RUE
Reg No. 32,893

The Assignee hereby appoints the following U.S. attorneys to prosecute this application and any continuation, divisional, continuation-in-part, or reissue application thereof, and to transact all business in the U.S. Patent and Trademark Office connected therewith: Robert Greene Sterne, Registration No. 28,912; Edward J. Kessler, Registration No. 25,688; Jorge A. Goldstein, Registration No. 29,021; Samuel L. Fox, Registration No. 30,353; David K.S. Cornwell, Registration No. 31,944; Robert W. Esmond, Registration No. 32,893; Tracy-Gene G. Durkin, Registration No. 32,831; Michele A. Cimbala, Registration No. 33,851; Michael B. Ray, Registration No. 33,997; Robert E. Sokohl, Registration No. 36,013; Eric K. Steffe, Registration No. 36,688; Michael Q. Lee, Registration No. 35,239; and Steven R. Ludwig, Registration No. 36,203. The Assignee hereby grants said attorneys the power to insert on this Power of Attorney any further identification that may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office.

The Assignee hereby authorizes the U.S. attorneys named herein to accept and follow instructions from Mathys & Squire, 100 Gray's Inn Road, London WC1X 8AL, Great Britain as to any action to be taken in the U.S. Patent and Trademark Office regarding this application without direct communication between the U.S. attorneys and the Assignee. In the event of a change in the persons from whom instructions may be taken, the U.S. attorneys named herein will be so notified by the Assignee.

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SIGNATURE: [Signature]
BY: J M HARKER
TITLE: SECRETARY MRA (CAMR)
DATE: 4 OCTOBER 2001.